Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Claims 1, 3, 7, 10 and 13 are canceled without prejudice or disclaimer.

Claims 6, 9 and 12 are amended.

Claim 15 is new.

Listing of Claims:

1. (Canceled)

2. (Currently Amended) A heat exchanger according to claim [[1]] 15, wherein the connecting channels comprise straight bores each crossing at least two tube bores.

3. (Canceled)

4. (Currently Amended) A heat exchanger according to claim [[3]] 15, wherein the plugs are detachable, the tube bores at the top face and the plugs are provided with corresponding screw thread.

5. (Canceled)

6. (Currently Amended) A heat exchanger, comprising:

a) a shell having a shell-sided supply and a shell-sided discharge through which a first medium under pressure can flow;

b) a tube plate fixed to the shell, the tube plate extending generally in a plane and including:

i) a back face

ii) a top face,

iii) a plurality of supply tube bores and a plurality of discharge tube bores extending substantially transversely to the plane of the tube plate from the back

face to the top face, and each tube bore extends through the back face and through the top face, the tube bores are sealed with plugs that extend through the top face, the plugs comprise a body part and a clamping member wherein the clamping member is attached to the body part;

iv) at least two connecting channels located in the plane of the tube plate and extending generally transversely to the supply tube bores and the discharge tube bores, a first one of the connecting channels crossing at least a first plurality of the supply tube bores whereby the first plurality of supply tube bores are in flow communication with the first connecting channel, and a second one of the connecting channels crossing at least a first plurality of the discharge tube bores whereby the first plurality of discharge tube bores are in flow communication with the second connecting channel; and

v) a tube-sided supply in flow communication with the first connecting channel and a tube-sided discharge in flow communication with the second connecting channel; and

c) a nest of tubes extending at least partly within the shell, each tube having a supply side connected to a respective one of the supply tube bores and a discharge side connected to a respective one of the discharge tube bores.

7. (Canceled)

8. (Currently Amended) A heat exchanger according to claim [[7]] 6, wherein the plugs are detachably disposed within the supply tube bores and the discharge tube bores, the tube bores at the top face and the plugs are provided with corresponding screw thread.

9. (Currently Amended) A heat exchanger, comprising:

a) a shell having a shell-sided supply and a shell-sided discharge through which a first medium under pressure can flow;

b) a tube plate fixed to the shell, the tube plate extending generally in a plane and including:

i) a back face

ii) a top face,

iii) a plurality of tube bores extending substantially transversely to the plane of the tube plate from the back face to the top face, each tube bore extending through the back face and through the top face, the tube bores are sealed with plugs that extend through the top face, the plugs comprise a body part and a clamping member wherein the clamping member is attached to the body part;

iv) at least one connecting channel located in the plane of the tube plate and extending generally transversely to the tube bores, the connecting channel crossing at least a first plurality of the tube bores whereby the first plurality of tube bores are in flow communication with the connecting channel; and

c) a nest of tubes extending at least partly within the shell, each tube being connected to a respective tube bore.

10. (Canceled)

11. (Currently Amended) A heat exchanger according to claim [[10]] 9, wherein the plugs are detachably disposed within the tube bores, the tube bores at the top face and the plugs are provided with corresponding screw thread.

12. (Currently Amended) A tube plate for use in a heat exchanger, comprising:

a) a back face,

b) a top face,

c) a plurality of tube bores extending substantially transversely to the back and top faces of the tube plate from the back face to the top face, ~~and~~ each tube bore extends through the back face and through the top face, the tube bores are sealed with plugs that extend through the top face, the plugs comprise a body part and a clamping member wherein the clamping member is attached to the body part;

d) at least two connecting channels extending generally parallel to the back face and top face of the tube plate and extending generally transversely to the tube bores, a first one of the connecting channels crossing a first plurality of the tube bores whereby the first plurality of tube bores are in flow communication with the first connecting channel, and a second one of the connecting channels crossing a second plurality of the tube bores whereby the second plurality of tube bores are in flow communication with the second connecting channel; and

e) a tube-sided supply in flow communication with the first connecting channel and a tube-sided discharge in flow communication with the second connecting channel.

13. (Canceled)

14. (Currently Amended) A tube plate according to claim [[13]] 12, wherein the plugs are detachably disposed within the tube bores, the tube bores at the top face and the plugs are provided with corresponding screw thread.

15. (New) A heat exchanger, comprising:

(a) a shell designed as a pressure vessel having a shell-sided supply and a shell-sided discharge through which a first medium under pressure can flow;

(b) a nest of tubes extending at least partly within the shell having a tube-sided supply and a tube-sided discharge through which a second medium can flow in heat exchanging contact with the first medium under pressure;

(c) a tube plate fixed to the shell, extending generally in a plane, the tube plate comprising a flat body, a back face, a top face, and a plurality of tube bores,

(i) the tube bores extending substantially transversely to the plane of the tube plate, from the back face to the top face,

(ii) the tube bores are designed to be continuous,

(iii) the tube bores located at the top face are sealed with plugs, the plugs comprise a body part and a clamping member wherein the clamping member is attached to the body part,

(iv) each of the tubes is separately connected with the tube-sided supply or the tube-sided discharge in the tube bores,

(v) the number of tube bores is equal to the number of tubes,

(d) a connecting channel wherein each of the tubes is separately connected with the tube-sided supply or the tube-sided discharge via the connecting channel and wherein the connecting channel is in the plane of the tube plate and crosses the tube bores.

16. (New) A heat exchanger according to claim 15, wherein a sealing ring is arranged between the clamping member and the body part.

17. (New) A heat exchanger according to claim 16, wherein a support member is arranged between the clamping member and the body part.

18. (New) A heat exchanger according to claim 6, wherein a sealing ring is arranged between the clamping member and the body part.

19. (New) A heat exchanger according to claim 18, wherein a support member is arranged between the clamping member and the body part.

20. (New) A heat exchanger according to claim 9, wherein a sealing ring is arranged between the clamping member and the body part.

21. (New) A heat exchanger according to claim 20, wherein a support member is arranged between the clamping member and the body part.

22. (New) A tube plate according to claim 12, wherein a sealing ring is arranged between the clamping member and the body part.

23. (New) A tube plate according to claim 22, wherein a support member is arranged between the clamping member and the body part.